White Paper

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Top 10 Considerations for Choosing Database Tools – Beyond the Feature Matrix

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May 2010

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INTRODUCTION

We've all done it: Meticulously created a huge spreadsheet with a comprehensive list of features matched against potential software vendors. If you've been in the technology business any length of time, you also know that the feature-matrix-by-vendor approach has its limitations — and database tools are no exception.

Since the feature matrix only tells you part of the story, try incorporating these top ten considerations into your analysis. The result will be a more thoroughly considered database tool purchase for yourself and your organization.

TOP TEN CONSIDERATIONS

1. COLLABORATION

Let's face it. Both the database developer and database administrator's role within the application lifecycle is expanding. Database tools that enable collaboration and communication with management, QA, development and partners can help everyone succeed within this connected environment. For example, are you able to pinpoint and communicate problems in a way that can quickly get management, development and QA on the same page? How quickly can you generate a report you'll need to prove an SLA? Can you place projects under a central version control system with just a few mouse clicks? How quickly can you compare and communicate ongoing schema changes between development and production? How about reverse engineering an application that a line of business drops on you unexpectedly? When evaluating database tools, consider how each tool will help you collaborate and communicate with internal and external stakeholders.

2. DATA VISUALIZATION

Most people have a preference on how they like to analyze information. Some prefer a graphical approach; some want streams of raw data; while still others benefit from both. Take an inventory of your own team members' preferences and choose your tools accordingly. As just one example, the past few years have seen the emergence of novel SQL tuning techniques, including Visual SQL Tuning (VST). VST is a way to visualize SQL statements graphically in order to quickly understand the major components of a query, its flow and best execution path. These types of graphical representations of the data can improve your SQL tuning and leverage the different ways in which your team members can analyze data and "connect the dots".

3. Depth of DBMS Support

Over the last 20 years many software tools companies have come and gone and new entrants are popping onto the scene all the time. It can be confusing when looking a list of features from these vendor websites. After all, if a vendor has checked off all your boxes and is offering an incredibly low price, then why wouldn't you include them in your evaluation? One thing you may wish to consider is making sure that these lower-priced tools aren't playing to the lowest common denominator in terms of each DBMS. For example, they might show you tables and columns, but will they show you specialized table options and specialized objects for each DBMS in your environment? In most cases, larger players and those that have long track records of working with each database vendor go much deeper into each DBMS.

4. Heterogeneous vs. Cross-Platform

Almost all DBAs currently support or will be supporting a mixed DBMS environment, so understanding the nuances between true heterogeneous tools versus vendors that are simply "cross-platform" may be an important consideration.

Cross-platform vendors offer different versions of the same tool— typically a separate install for each DBMS. When evaluating these vendors, pay close attention to how each version of the tool works as you move across DBMSes (e.g. variations in workflow, navigation, look-and-feel, etc.) as this will impact the learning curve for each new hire and everyone's learning curve for each new DBMS.

A true heterogeneous tool supports a single or mixed DBMS environment with one standard tool, one license spend, and one interface. There should be no toggling between disparate tools for each database you manage. Rather, you should expect a single, consistent, and elegant user experience across all DBMSes. True heterogeneous tools will grow with you as your environment changes, and are easily shared across teams and organizations. A few advantages to consider with heterogeneous tools include increased productivity, reduced tooling costs, and organizational agility (achieved by standardizing on one tool for multiple DBMSes).

5. When You've Only Got One Brand of DBMS

But what if you are currently working with only one brand of DBMS? Most database environments today are a mix of not only different DBMS brands, but of different versions as well. A true heterogeneous tool provides a single interface/product for all database types AND versions. So, you can visualize, manage, program, monitor, or support all together in one UI. As one example, let's suppose your organization has Oracle versions 8i through 11g. This would equal multiple versions of Oracle Enterprise Manager (Oracle's administration tool) as opposed to a single heterogeneous tool that shields you from the complexity of having to manage different versions of the database as well as different versions of the database tool.

6. The Hidden Costs of Software Management and Deployment

In "The End of Software", Timothy Chou cites Gartner Inc. as saying "Customers can spend up to four times the cost of their software license per year to own and manage their applications". In a world where cloud computing is catching on in the business applications market, many organizations are now paying closer attention to the costs associated with software tool license management and deployment. As a result, you may want to consider DBA tools that can be centrally provisioned and managed from a "private tool cloud" which can simplify licensing, reduce costs, and control access by virtualizing and standardizing how tools are delivered to your team. For example, which vendors offer on-demand deployment, without installation on a local machine, and can run multiple versions without conflicts? Do you need to adapt toolsets by project or platform? Assess the impact of on-demand access and how it might allow your organization to adapt to changing business demands.

7. Future Proof Investment

Even for small businesses or teams within large organizations, the likelihood of inheriting an application (or purchasing a COTS application) with specific database requirements is high. In fact, Forrester Research says that 90% of enterprises already have more than one DBMS. By their nature, tools from DBMS vendors lock DBAs and developers into one environment only. That means your organization's knowledge and also your personal expertise is limited. Consider the future advantages of having a single tool that can enable everyone to come up to speed quickly when business needs change.

8. Staffing Flexibility

Do you ever wish you could take your best MS SQL Server developer and put her on an Oracle project? Or perhaps you work at a smaller organization where team members need to cover for each other during family vacations or other contingencies? To facilitate these kinds of situations, look at tools that enable team members to extend their skills into less familiar databases. There may be great value in enabling team members to produce on-the-fly, DBMS-specific language conversions or being able to easily create new users (along with their roles, privileges and permissions) across multiple DBMSes. Also, what's your organization's tolerance for downtime? Regardless of your size, it may make sense to look at tools that provide 24/7 database monitoring and can send out threshold alerts to multiple team members.

9. Performance and Availability

DBAs and developers are under constant pressure to improve database and application performance. Performance optimization is also a key ingredient in the struggle to stretch IT dollars to their absolute limit. Since performance problems can occur at anytime, you may want to consider tools that can prevent, find and fix performance problems throughout the entire system development lifecycle. Of course, DBAs and developers deal with the reality that issues will always occur in production, so consider 24x7 monitoring and alerts so you can

catch fires early and fix them quickly before outages occur. As you're evaluating database tools, try to imagine your state of mind when a crisis occurs and the value of being able to quickly pinpoint and resolve the problem. At that critical moment, how much is it worth to you to be able to quickly scan a performance dashboard vs. having to navigate through dozens or even hundreds of screens?

10. Be the Hero!

Be the hero! Consider tools that will increase your personal performance and value to your organization while raising the profile of your entire team. Look at both the company behind each individual tool as well as their entire tool chest. Who's going to have your back in a pinch? What's the value of having instant access to a comprehensive suite of database tools and solutions from a single vendor? The right choice should leave everyone wondering, "How'd he do that!?!"

Conclusion

In today's constantly changing business and technology environment, choosing the right tools can be difficult. The traditional approach of looking at a long list of features by vendor only tells part of the story. By going beyond the feature matrix, you can make dramatic improvements to your productivity and systems reliability.

About the Author

Elias Terman has 20 years of technology management experience and currently serves as senior product marketing manager for Embarcadero Technologies. In this position, Elias is the business line owner for Embarcadero's Database Management and Performance Management Solutions, a suite of world-class products used by 90 of the Fortune 100 companies and the most demanding vertical market worldwide. In addition to working stints in the corporate world, Elias founded several technology companies including his own software development firm based in Mexico City, where he led software development projects for Global 2000 companies including Citigroup, The Export Bank of Mexico, The US Trade Department, Aegon Insurance and Allied Domeq. He holds a B.A. in economics from San Diego State University and a Masters in Pacific International Affairs from the University of California at San Diego.

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